ಬೆಂಗಳೂರು ವಿದ್ಯುತ್ ಸರಬರಾಜು ನಿಗಮ ನಿಯಮಿತ

CIN: U04010KA2002SGC030438

BANGALORE ELECTRICITY SUPPLY COMPANY LIMITED

Email : gmcom@bescom.co.in
Ph:080-22341177
No: BESCOM/D(T)/GM(M&C)/2025-26/526

Corporate Office,
BESCOM, K.R.Circle,
Bangalore – 560 001.
Date: 25/08/2025

Clarification No.-1

Sub: Procurement of Electrostatic meters for replacement of MNR/ Faulty/ Burnt-out meters or for department purpose for a period of one year on rate contract basis extendable for another one year at discretion of BESCOM.

Ref: 1. Paper Notification dated:15.07.2025.
2. KPPP Enquiry No. BESCOM/2025-26/IND0107.
3. Pre-bid meeting held on 12.08.2025.

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The following clarification pertaining to subject bid enquiry is herewith issued consequent to request from the prospective bidders and deliberations during pre-bid meeting:

Sl. No.	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
1	**Notice inviting tenders (NIT): QUALIFYING REQUIREMENTS:** **A. Technical requirement:** **Clause 1:** The bidder should be in existence as any of the following: a. Company incorporated in India under the Companies Act, 1956/ 2013 including any amendment thereto; **Documents to be uploaded:** 1. Certificate of incorporation issued by Registrar of Companies as per Companies Act 1956/ 2013 along with Memorandum of Association and Articles of Association of the Company. 2. Annual filings (E-Forms AOC-4, MGT-7) filed by the Company to Registrar of Companies (Ministry of Corporate Affairs, Government of India) for preceding two financial years. 3. Declaration from Directors of the Company stating that	Request you to consider only certificate of incorporation issued by Registrar of Companies as per Companies Act 1956/ 2013 as proof of existence.	Tender condition prevails.

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	they are not disqualified to be a Director of the Company along with the list of Companies in which they are Directors as on the date of inviting tender(s).		
2	**Notice inviting tenders (NIT): QUALIFYING REQUIREMENTS: B. Technical requirement: Clause 8:** S' mark safety ccrtification for singlc Phase (5-30A), three phase whole current (5-30A) and for three phase CT operated energy meters manufacturing in India issued by STQC. The certificates are to be uploaded.	We would like to bring in your kind attention the following: Offered meters complies IS 13779 and IS 15959 with latest amendments. IS 13779 complies of all safety tests which are covered under this standard. Since we are already submitting latest type tests reports of offered meter, we hereby request you to keep S mark safety certification as optional and not mandatory.	Tender condition prevails.
3	**Technical Specification Single phase Whole Current meters Clause No. 2.1.1** IS 13779:**1999** with latest amendments.	We request you to kindly accept latest IS 13779:**2020**.	Latest IS 13779:2020 will be accepted.
4	**Technical Specification Single phase Whole Current meters Clause No. 4.1. Principal Parameters: Surge Withstand test:** The meter shall withstand impulse voltage test at the rated impulse voltage of 10kV as per procedure laid down in IS: 13779:**1999**.	We would like to state this Parameter shall be as per IS-13779: **2020**.	Parameter as per latest IS 13779:2020 will be accepted.
5	**Technical Specification Single phase Whole Current meters Clause No. 5.1 (c):** The window portion shall be fully transparent, unbreakable UV stabilized polycarbonate for easy reading of all the displayed values/ parameters, nameplate details and calibrating LED. The window should be scratch and break resistant **with silicon coating.** It should not fade in course of time and become opaque causing inconvenience for rcading.	We will provide transparent meter top cover with unbreakable UV stabilized polycarbonate for easy reading of all the displayed values/ parameters, nameplate details and calibrating LED **without silicon coating.** It will not fade in the course of time, and it would be convenience for reading.	Tender condition prevails.
6	**Technical Specification Single phase Whole Current meters Clause No. 5.1 (d):** The meter cover should be **ultrasonically welded** with the meter base. The cover shall not just be held with base on two points of sealing. It should be supported all along the boundary of base and cover of the meter as well, so that even before ultrasonic welding, the cover should be fit	We request you to kindly accept the Meter cover and base **chemically welded** that it will be break to open type arrangement. We request you to kindly accept 'TC open' display on meter LCD display that will be display permanently after the attempt to open the meter cover from the base.	Tender condition prevails.

Sl. No.	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
	perfectly with the base. The ultrasonic welding of meter case shall be such that if in case of any attempt to open the meter cover from base, there should be a clearly visible evidence of opening / tampering of meter case, meter shall display "Meter Cover Open" permanently.		
7	**Technical Specification Single phase Whole Current meters Clause No. 5.2 (a):** The moulded terminal block shall be made from best quality **phenol formaldehyde/** high impact strength UV stabilized Glass filled Poly Carbonate conforming to IS: 13779:1999 (latest amendment) having adequate insulating properties and mechanical strength with tin-plated brass inserts for connecting terminals.	Terminal Block will be made by **PBT** with 30% G.F. Kindly accept.	Terminal Block made of PF/PBT will be accepted.
8	**Technical Specification Single phase Whole Current meters Clause No. 5.2(d):** The meter terminal block shall have **tin**-plated brass terminal inserts. The terminals shall have suitable construction with barriers and cover to provide firm and safe connections of incoming and outgoing leads. The terminal screws shall have flat bottom so as not to pierce in the external conductors. All electrically live screws shall be of nickel/ tin plated brass. The terminals shall be of suitable rating to carry continuously 150% Imax Current -and made of electroplated (or tinned) brass. Any other provision which meets this in a better manner / way shall also be considered. The bidder should elaborate the provision adopted.	Terminal inserts will be **nickel** plated brass. Kindly accept.	Terminal inserts with tin/nickel plated brass will be accepted.
9	**Technical Specification Single phase Whole Current meters Clause No. 5.3: CT's/SHUNT ARRANGEMENT** (a) The current sensing in the meter shall be based on CT and / shunt type. This is necessary to ensure accurate recording by the meter during the condition when DC component exists in the load,	Need to be clarify. We understand that the requirement of the current sensing in the meter shall be based on CT and / shunt type for, Phase and neutral currents to be compared and higher of the two to be used for measurement.	Yes, as per your understanding.

Sl. No.	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
	Phase and neutral currents to be compared and higher of the two to be used for measurement. Specific confirmation to be submitted by the bidders that accuracy of measurement will not suffer due to utilization of shunt on account of thermal stability and temperature coefficient, up to an operational temperature of 80°C.		
10	**Technical Specification Single phase Whole Current meters Clause No. 5.3: CT's/ SHUNT ARRANGEMENT** The CTs **shall have proper magnetic shields** and shall be mounted with the meter base through proper fixing arrangement so that it should have a firm support and should not move from its position in any case.	CT will be provided **without shield** and will be fixed on meter PCB.	Tender condition prevails.
11	**Technical Specification Single phase Whole Current meters Clause No. 5.4(b): Display Parameters (i) Auto Scroll Display:** Details of the legends are required to be **printed below name plate details in short**, for convenience of the meter reader. Stickers of any kind will not be acceptable.	Details will be provided on **terminal cover**, kindly accept.	Tender condition prevails.
12	**Technical Specification Single phase Whole Current meters Clause No.5.4 ii (e,f):** e. Billing MD (First Previous Month MD in kW with date& Time (b1)). f. Cumulative Active Energy (kWh) for each calendar month for previous six months history. Maximum demand (in kW) with 30 minutes integration period and maximum of these in a calendar month for previous six months history may be given in separate page.	Parameter (e & f) MD in kW (b1) both are same. We provide current month MD with date & Time instead of Billing MD (First Previous Month MD in kW with date& Time (b1)).	Tender condition prevails.
13	**Technical Specification Single phase Whole Current meters: Clause No.5.4(b) DISPLAY PARAMETERS (ii) PUSH BUTTON DISPLAY** (f) The legends for KWh and MD should be as below	The legends for kWh and MD will be a below- last bill "MD, b1 -----MD KW", second last bill MD, "b2----MD KW" so on, as per LCD design. Same in billing energy parameters "b1----Kwh".	Tender condition prevails.

Sl. No.	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
	<table><tr><th>Months</th><th>MD</th><th>Energy</th></tr><tr><td>August (Current Month)</td><td>MD</td><td>kWh</td></tr><tr><td>July</td><td>MD1</td><td>kWh1</td></tr><tr><td>June</td><td>MD 2</td><td>kWh2</td></tr><tr><td>May</td><td>MD3</td><td>kWh3</td></tr><tr><td>April</td><td>MD4</td><td>kWh4</td></tr><tr><td>March</td><td>MD5</td><td>kWh5</td></tr><tr><td>Feb</td><td>MD6</td><td>kWh6</td></tr></table>		
14	**Technical Specification Single phase Whole Current meters: Clause 5.4. Display Parameters d. Self-Diagnostic Features:** ii. The meter shall display unsatisfactory functioning or non-functioning of Real Time clock battery.	Meter will display indication if non-functioning of primary battery.	Tender condition prevails.
15	**Technical Specification Single phase Whole Current meters: Clause 5.7 COMMUNICATION CAPABILITY** **(a)(v).** Optical port of the meter shall be provided with a suitable covered sealing arrangements having no physical access from outside without breaking the seal Rs232 port should be provided under the terminal cover so that it cannot be accessed without opening the terminal cover **Rs232 shall have suitable sealing facility.**	RS232 port will be provided under the sealed Terminal cover. RS232 in the form of C-type will be provided.	Tender condition prevails.
16	**Technical Specification Single phase Whole Current meters: Clause 5.8 TAMPER AND FRAUD PROTECTION:** **a. Current Reversal In current coil:** The meter should register energy consumption accurately in forward direction irrespective of direction of current in the current coil **(i.e. on reversal (interchange) of input (line) and output (load) terminals or phase and neutral interchange)** - the reverse indication is recorded in the internal register and also in display.	Meter will record energy accurately & forward direction. As per IS15959 tamper logging is not applicable.	Tender condition prevails.
17	**Technical Specification Single phase Whole Current meters: Clause 5.8 TAMPER AND FRAUD PROTECTION:** **d. DC Immunity:** The meter should not saturate	Meter will record energy at rated voltage, UPF in case of DC injection on outgoing neutral terminal through diode.	Tender condition prevails.

Sl. No.	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
	on passing of direct current which can cause the meter either to stop recording or record inaccurately as per IS: 13779 (latest version). Apart from the above, **meter should record energy as per voltage measured between incoming phase and neutral terminals when DC signal is injected on the neutral terminal of the meter through Diode. The test in this condition will be carried out at Vref applied to incoming phase and input terminal of diode.**		
18	**Technical Specification Single phase Whole Current meters: Clause 5.8 TAMPER AND FRAUD PROTECTION:** **h.** The bidder should upload the details as to how their meter is able to detect/protect the above **tampers and fraud with sketches and phasor diagrams** wherever necessary. Additional features, If any, in their meter may also be clearly indicated.	Tamper and fraud ----Phasor diagram not needed for single phase meter so kindly remove.	Tender condition prevails.
19	**Technical Specification Single phase Whole Current meters: Clause 5.8. TAMPER AND FRAUD PROTECTION:** **j. Meter Cover Open:** **Display to be locked. The meter shall detect/ log with date and time of meter cover opening as 'tamper', even in absence of supply.** This tamper shall also be displayed on the meter LCD as 'Meter cover open'. Meters should be recording continuously which is downloadable.	Please confirm, which one will be blocked either auto or push, or both.	Tender condition prevails.
20	**Technical Specification Single phase Whole Current meters: Clause 5.9: SEALING ARRANGEMENT OF THE METER** **(ii)** Good quality seals should have six digits non repeated numbers with **embossing** on both sides - one side with the logo of the manufacturer and on the other side the logo of ESCOM.	Sr. No. will provide by laser engraved	Embossed/ Laser engraved will be accepted.
21	**Technical Specification Single phase Whole Current meters: Clause 5.10: FIXING ARRANGEMENT OF METER:**	Meter has Key Type Hole for holding screw.	Tender condition prevails.

<table>
<tr><th>Sl. No.</th><th>As existing Clause No.</th><th>Clarifications/amendments sought by the firm</th><th>BESCOM Clarifications</th></tr>
<tr><td></td><td>Every meter shall have three fixing holes - one at the top and two at the bottom. The top hole shall be provided with a special clip at the back of the meter/ shall be key-hole so that holding screw is not accessible to the consumer after the fixing of the meters.</td><td></td><td></td></tr>
<tr><td>22</td><td>Technical Specification Three phase Whole Current meters: Clause No.5.1(d): The meter cover should be ultrasonically welded with meter base. The cover shall not just be held with base on two points of sealing. It should be supported all along the boundary of base and cover of the meter as well, so that even before ultrasonic welding, the cover should be fit perfectly with the base. The ultrasonic welding of meter case shall be such that if in case of any attempt to open the meter cover from base, there should be a clearly visible evidence of opening / tampering of meter case, meter shall display "Meter Cover Open" permanently.</td><td>The meter cover should be ultrasonically welded / Chemical welded with meter base.</td><td>Tender condition prevails.</td></tr>
<tr><td>23</td><td>Technical Specification Three phase Whole Current meters: Clause No.5.4(b): DISPLAY PARAMETERS (ii) PUSH BUTTON DISPLAY

Cumulative Active Energy (kWh) and PF for each calendar month for previous six months history. Maximum demand (in kW) with 30 minutes integration period and maximum of these in a calendar month for previous six months history may be given in separate page.

The legends for kWh and MD may be as below:

<table>
<tr><th>Month</th><th>MD</th><th>Energy</th></tr>
<tr><td>Aug. (Current month)</td><td>MD</td><td>kWh</td></tr>
<tr><td>July</td><td>MD1</td><td>kWh1</td></tr>
<tr><td>June</td><td>MD2</td><td>kWh2</td></tr>
<tr><td>May</td><td>MD3</td><td>kWh3</td></tr>
<tr><td>April</td><td>MD4</td><td>kWh4</td></tr>
<tr><td>March</td><td>MD5</td><td>kWh5</td></tr>
<tr><td>February</td><td>MD6</td><td>kWh6</td></tr>
</table>
</td><td>We will provide the legend as per Genus standards.</td><td>Tender condition prevails.</td></tr>
</table>

Sl. No.	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
24	**Technical Specification Three phase Whole Current meters: Clause No.5.4(e): Meter reading at Power outage** The meter shall have industrial grade rechargeable long life battery with sufficient capacity to enable the meter reader to take meter reading even under power off conditions.	We will provide a non-chargeable battery with a long life and sufficient capacity. The design life of the battery is 10 years.	Tender condition prevails.
25	**Technical Specification Three phase Whole Current meters: Clause No.5.13: CONNECTION DIAGRAM AND TERMINAL MARKINGS:** The connection diagram of the meter shall be permanently engraved on the inside portion of terminal cover. Connecting terminals of current and voltage shall be in the sequence of Phase (in)- Phase(out). Eg : M1L1,M2L2, M3L3 **Or suitable markings.** Two neutral terminals should be at the end after L3. The terminal marking should be clearly embossed on terminal block which is visible distinctly from outside.	Terminal marking as per genus standard.	Tender condition prevails.
26	**Technical Specification Three phase CT operated meters: Clause No.13: GENERAL AND CONSTRUCTIONAL REQUIREMENTS:** The meter-cover shall have one window. The window shall be of transparent, UV stabilized polycarbonate (shall confirm to IS 11731 FH 1 Category besides meeting the test requirement of heat deflection test as per ISO 75, Glow wire test as per IS 11000 part 2/Sec-1-1984 or IEC PUB,60695-2-12, Ball pressure test as per IEC 60695-10-2 & Flammability test as per UL 94 or as per IS 11731 part 2 1986) or equivalent high grade engineering plastic for easily reading all the displayed values/parameters, name plate details and observation of operation indicator. The window shall be ultra-sonically welded with the meter cover such that it cannot be removed undamaged without breaking the meter cover seals, even in	TOP Cover fully transparent.	TOP Cover fully transparent will be accepted.

Sl. No.	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
	case of transparent meter cover which has separate window.		
27	**Technical Specification Three phase CT operated meters: Clause No.19(9):** The meter cover should be ultrasonically welded with meter base. The cover shall not just be held with base on two points of sealing. It should be supported all along the boundary of base and cover of the meter as well, so that even before ultrasonic welding, the cover should be fit perfectly with the base. The ultrasonic welding of meter case shall be such that if in case of any attempt to open the meter cover from base, there should be a clearly visible evidence of opening / tampering of meter case, meter shall display "tamper" permanently.	We will provide ultra-sonically welded / Chemical welded.	Tender condition prevails.
28	**Technical Specification Three phase CT operated meters: Clause No.25(B):** 6 months/ of billing parameters should be provided in demand mode. MD-MD1...MD6, Energy-kWh, kWh1....kWh6, kvah, PF. Zone wise ToD for 6 months MD0...MD3, C0...C.3	We will provide the legend as per Genus standards.	Tender condition prevails.
29	**Technical Specification Three phase CT operated meters: Clause No.25(B (iii) to (v):** The following parameters shall be displayed on demand. iii. Cumulative period of failure of potential in each phase shall be displayed in **days / hours / minutes** from the date of Installation. iv. Cumulative period of failure of current in each phase shall be displayed in **days / hours / minutes** from the date of Installation. v. Cumulative period of failure of power shall be displayed in **days / hours / minutes** from the date of Installation.	AS Per IS:15959	Tender condition prevails.
30	**Technical Specification Three phase CT operated meters: Clause No. 25: DISPLAY SEQUENCE : C. Battery mode parameters** The meter shall have industrial grade rechargeable long life	We will provide a non-chargeable battery with a long life and sufficient capacity. The design life of the battery is 10 years.	Tender condition prevails.

Sl. No.	As existing Clause No.	Clarifications/amendments sought by the firm	BESCOM Clarifications
	battery with sufficient capacity to enable the meter reader to take meter reading even under power off conditions. The same push button shall be used for displaying the readings included in auto scroll mode only during power outages.		

All other terms & conditions of the subject tender remain unaltered.

(Yogesh.B.K)
General Manager (Ele.),
Meters & Commercial
BESCOM

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